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25X1

File: Mod II Incinerator

ELECTRIC MOTOR FOR
MOD II INCINERATOR

$$P = EI \sqrt{3} \cos \theta \text{ for 3 Phase}$$

Full load { 5.6 a @ 220V
60 cps
3500 rpm { 2.8 a @ 440V

$$P = 220(5.6)\sqrt{3}(1) = 2140 \text{ W}$$

$$= 2140 \text{ W}$$

Full load { 6.2 a @ 220V
50 cps
2950 rpm { 3.1 a @ 440V

$$P = 220(6.2)\sqrt{3}(1) = 2470 \text{ W}$$

$$= 2470 \text{ W}$$

DOC	59	REV DATE	4/20/80	BY	010928
ORIG COMP	08	OP	36	TYPE	30
ORIG CLASS	4	PAGES	3	REV CLASS	5
JUST	22	NEXT REV	20/0	AUTH	NR 70-2

$$P = EI \cos \theta \text{ for Single Phase}$$

Full load { 20.8 a @ 115V
60 cps
3500 rpm { 10.4 a @ 230V

$$P = 115(20.8)(1) = 2390 \text{ W}$$

$$P = 230(10.4)(1) = 2390 \text{ W}$$

Full load { 27 a @ 115V
50 cps
2950 rpm { 13.5 a @ 230V

$$P = 115(27)(1) = 3110 \text{ W}$$

$$= 3110 \text{ W}$$

ORIGINAL CL BY 21012
☐ DECL ☒ REVW ON 20/0
EXT BYND 6 YRS BY 21012
REASON 20/0

Verify that 5kw generator O.K.

" " 15 kw "
is necessary for design
starting performance.

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Synchronous Motor --- Starting current will average 6 → 7 times full-load current.

Single Phase Induction Motor --- Starting current allowable for NEMA is 10 → 20 times full load

$$65 \text{ a @ } 230 \text{ V} = 14930 \text{ W}$$

$$\frac{5 \text{ kw}}{230} = 21.8 \text{ amp}$$

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G.E. MOTOR

for Model 2 Incinerator

Motor Information

2 hp G.E. Motor 115/230 V

G.E. Model 5KC184AG120

G.E. Code J

Frame number 184

Shaft diameter $7/8$ "

Power Requirement

10.4 amp @ 230V } Full load
20.8 amp @ 115V }

65 amp @ 230V for locked rotor

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Full load torque --- 3 lb ft

Locked rotor " --- 5.9 lb ft

Pull up " --- 5.7 lb ft

Breakdown " --- 6.0 lb ft

Service Factor --- 1.0